

CLAIMS

What we claim is:

1 1. A video converter board for converting stroke/raster video
2 formatted data into a Red, Green, Blue (RGB) video having a sync-
3 on-green (SOG) control signal formatted for a serial interface
4 conforming to Electronic Industries Association (EIA) standards,
5 said stroke/raster video data comprising X deflection signals, Y
6 deflection signals and video-in signals and said RGB video data
7 being synchronized by said sync-on-green (SOG) signal, said video
8 converter board comprising:

- 9 a) analog to digital front-end circuitry for sampling at a
10 predetermined rate said X deflection, Y deflection and video-in
11 signals and converting each sampled signal into a corresponding
12 digital quantity;
- 13 b) video memory comprised of a plurality of banks for
14 storing each digital quantity;
- 15 c) memory control circuitry for sequentially selecting each
16 of the plurality of memory banks;
- 17 d) synchronization control circuitry having a first routine
18 for generating timing signals for said sync-on-green (SOG) signal
19 and a second routine for generating the memory addresses for
20 reading and blanking; and

21 e) a digital/analog converter output circuitry receiving in
22 response to said synchronization control circuitry, the formatted
23 RGB video data as well as the timing signals for said SOG signal
24 and outputting said SOG signal along with said RGB video data in
25 a manner conforming to said interface.

1 2. The video converter board according to claim 1, wherein said
2 sampling rate is about 40MHz.

1 3. The video converter board according to claim 1, wherein said
2 digital front-end circuitry comprises a combiner for combining
3 the X deflection and Y deflection digital quantities into a 20-
4 bit digital quantity.

1 4. The video converter board according to claim 1, wherein said
2 memory, said memory control circuitry, said synchronization
3 control circuitry and said digital/analog converter output end
4 circuitry are synchronized to an 80MHz clock rate.

1 5. The video converter board according to claim 1, wherein said
2 serial interface is formatted in accordance with a RS-343A
3 standard.

1 6. The video converter board according to claim 1, wherein each
2 memory bank has a capacity of about 1 Mega (M) byte.